

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Confirmation No.: 5377

Makiko KITAZOE, et al

Art Unit: 1792

Application No.: 10/591,905

Examiner: Keath T. CHEN

Filed: November 6, 2006

Attorney Docket No.: 029567-00010

For: SELF-CLEANING CATALYTIC CHEMICAL VAPOR DEPOSITION APPARATUS
AND CLEANING METHOD THEREOF

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

March 12, 2008

Sir:

The Office Action dated December 12, 2007, has been received and carefully noted. The following remarks are being submitted as a full and complete response thereto. Claims 1-9 are pending in this application, and claims 10-18 are withdrawn. Reconsideration of the rejections of the claims is respectfully requested.

The Office Action objects to the Specification by asserting that the statement in paragraph [0007] that "a catalytic body has been heated to not less than 2000° C" is not commensurate with other recitations in the Specification. However, a closer examination of paragraph [0007] reveals that the paragraph recites the prior art shown in patent document 1 (Japanese Patent Laid Open 2001-49436), and not the claimed invention, heats the body to over 2000 °C. Accordingly, this recitation relates to the prior art and it is intended to be contrasted with the various claims of the present

invention. Accordingly, withdrawal of the objection to the Specification is respectfully requested.

The Office Action rejects claims 1-9 under 35 U.S.C. § 112, first paragraph, by asserting that the feature of “without etching the catalytic body itself” is not enabled by the disclosure. However, a closer examination of the disclosure at, for example, page 7, lines 19-21, reveals that there is sufficient support and enablement in the disclosure for the above feature.

Furthermore, the Patent Office indicates that the recitation in the Abstract of the suppression of the corrosion-induced degradation somehow contradicts the fact that the etching of the catalytic body can be “totally eliminated” in the Specification. The Patent Office appears to interpret the verb “suppress” as meaning the lowering but not the elimination of the degradation of the catalytic body. The Patent Office is respectfully reminded that Applicants can be their own lexicographers, and that the term “suppress,” as used in the Specification, conforms to the claimed feature of removing an adhering film which has adhered to the interior of the reaction chamber without etching the catalytic body itself.

For at least these reasons, claims 1-9 fulfill the requirements of 35 U.S.C. § 112, first paragraph. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 112, first paragraph, is respectfully requested.

The Office Action rejects claims 1-9 under 35 U.S.C. § 103(a) as being obvious over Ishibashi (U.S. Patent No. 6,375,756), Bridges (U.S. Patent No. 5,012,868) and Reale (U.S. Patent No. 5,451,754). The rejection is respectfully traversed.

In particular, the above-identified application claims a self-cleaning catalytic chemical vapor deposition apparatus that includes a power supply to apply a bias voltage to the catalytic body and a changeover switch which changes the polarity of the bias voltage and which removes an adhering film without etching the catalytic body itself when an introduced cleaning gas comes into contact with the resistance heated catalytic body, as recited in independent claim 1.

The Office Action alleges that Ishibashi teaches the claimed features of a self-cleaning catalytic chemical vapor deposition apparatus that uses the catalytic action of a catalytic body that is resistance heated within a reaction chamber (Office Action, page 6, lines 5-8), but admits that Ishibashi fails to disclose or suggest the claimed features of a power supply to apply a bias voltage to the catalytic body and a changeover switch which changes the polarity of the bias voltage to be applied (Office Action, page 7, lines 9-11). The Office Action relies on both Bridges and Reale to disclose or suggest these features. However, the Office Action is mistaken for the following reasons.

Bridges teaches a method and apparatus for corrosion inhibition in an electromagnetic heating system for heating a portion of a mineral fluid deposit adjacent an oil well or other mineral fluid well, in situ (Abstract). The Office Action attempts to use the teaching of an applied D.C. bias current to prevent corrosion from taking place in Bridges to remove a deposited film taught in Ishibashi. However, a closer examination of Bridges reveals that Bridges teaches applying and maintaining a D.C. bias current (Abstract; column 4, lines 1-9, and Figure 10). In other words, the scientific principle behind Bridges is to apply a current bias to prevent corrosion. The reference

does not change the polarity of the bias voltage. Thus, because Bridges teaching applying a DC current of the same polarity in order to prevent corrosion, Bridges teaches away from changing the polarity of the bias voltage, as recited in independent claim 1.

Furthermore, Bridges deals with inhibiting corrosion in downhole electrical heating in mineral fluid wells while Ishibashi teaches removing a deposited film in a CVD apparatus. These two areas are non-analogous art because the principles of chemical vapor deposition and principles of corrosion inhibition on the basis of applied voltage are separate and do not overlap. It appears that the Patent Office searched for the Bridges reference in order to find an applied potential but did not provide adequate motivation to do so. Applying a voltage to prevent corrosion is well known in the art, but applying a switching voltage to prevent deterioration of a catalytic body as disclosed in the above-identified application is not. For at least these reasons, a combination of Ishibashi and Bridges is improper.

Furthermore, although the Patent Office admits that neither Bridges nor Ishibashi teach a change-over switch which changes the polarity of the bias voltage, the Patent Office uses the teaching in Reale to disclose or suggest this feature. However, as discussed above with respect to Bridges, Bridges teaches maintaining a constant voltage and teaches a way from switching voltages because the operating principle of Bridges is to apply a constant potential in order to prevent the corrosion of a structure. Accordingly, combining the teachings of Reale and Bridges would result in Bridges switching its potential and thus would render Bridges inoperative for its intended purpose.

For at least these reasons, a combination of Ishibashi, Bridges and Reale is improper. Thus, a combination of these references fails to arrive at the subject matter of independent claim 1. Thus, independent claim 1, and its dependent claims 2-9, are patentable over all of the applied references. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) is respectfully requested.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 029567-00010.**

Respectfully submitted,



Tarik M. Nabi
Registration Number 55,478

Customer Number 004372
ARENT FOX LLP
1050 Connecticut Avenue, NW, Suite 400
Washington, DC 20036-5339
Telephone: 202-857-6000
Fax: 202-638-4810

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